

Appl. No.: 10/505,303
Reply to Office Action of: 03/21/2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Please cancel claim(s) 4 without prejudice.

Listing of Claims:

1. (Currently amended) Connector comprising ports to receive optical ferrules and to correspond to single-mode to multi-mode conversions ~~and vice versa~~, comprising an input optical port and an output optical port, characterized in that it comprises a set of two lenses each with a flat face, interposed between the two optical ports and placed against a plate made of transparent material to enable an adaptation of transmission of the light rays in space and in energy density, the two lenses having respective diameters and radii of curvature that are different to form a fanning out of the beam of light rays, from narrow to wide ~~ex in the other direction~~, from one optical port to the other.

2. (Previously presented) A connector according to claim 1, characterized in that a focal point of each of the lenses is located in the space constituted by the plate made of transparent material.

3. (Previously presented) A connector according to claim 1, characterized in that the transparent plate forms a divergent-convergent optical device.

4. (Cancelled)

Appl No.: 10/305,303
Reply to Office Action of: 03/21/2006

5. (Previously presented) A connector according to claim 1, characterized in that the transparent plate has a length of about one millimeter.

6. (Previously presented) A connector according to claim 1, characterized in that it is provided with two detachable sets of lenses, especially in order to correspond to two modes of conversion from a single-mode propagation to a multimode propagation or vice versa, this multimode propagation being capable of taking two types of propagation.

7. (Previously presented) A connector according to claim 1, characterized in that the plate, made of a transparent material that is preferably glass, is overmolded by the lenses.

8. (Previously presented) A connector according to claim 1, characterized in that the plate made of a transparent material that is preferably glass is overmolded by an array of lenses.

9. (ORIGINAL) A connector according to claim 8, characterized in that lenses overmolded on a face of the plate are lenses different from each other.

10. (Previously presented) A connector according to claim 7, characterized in that the lenses are made of resin overmolded on the plate.

11. (New) An optical connector comprising:

an input optical port adapted to receive at least one first optical ferrule;

Appl. No.: 10/505,303
Reply to Office Action of: 03/21/2006

an output optical port adapted to receive at least one second optical ferrule;

a combined transparent member and lens device interposed between the input and output optical ports, wherein the combined transparent member and lens device comprises:

a transparent member,

a first lens having a first flat face located against the transparent member and a first curved face with a first radii of curvature, and

a second lens having a second flat face located against the transparent member and a second curved face with a second different radii of curvature,

wherein the first and second lens are aligned along a light path through the combined transparent member and lens device between the optical ports, and wherein the combined transparent member and lens device is adapted to change the size of the light in the light path between the optical ports.